



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/760,232      | 01/21/2004  | Kia Silverbrook      | MPA26US             | 2211             |

24011 7590 05/05/2006

SILVERBROOK RESEARCH PTY LTD  
393 DARLING STREET  
BALMAIN, NSW 2041  
AUSTRALIA

|          |
|----------|
| EXAMINER |
|----------|

MARTIN, LAURA E

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2853

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/760,232

Applicant(s)

SILVERBROOK ET AL.

Examiner

Laura E. Martin

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Silverbrook et al. (US 6439908).

As per claim 1, Silverbrook et al. teaches a printhead assembly, comprising: at least one printhead module (figure 2, element 10) comprising at least two printhead integrated circuits (figure 4, element 18), each of which has nozzles formed therein for delivering printing fluid onto the surface of print media (column 3, lines 45-47), a support member (figure 7, element 16) supporting and carrying the printing fluid for the at least two printhead integrated circuits, and an electrical connector (figure 8, element 48) for connecting electrical signals to the at least two printhead integrated circuits; drive electronics incorporating at least two controllers for controlling the printing operation of at least one of the at least two printhead integrated circuits (column 3, line 49 and column 3, line 59-65) via the electrical connector, the at least two controllers being interconnected (figure 14, elements 58 and 60); and a casing in which the at least one printhead module and the drive electronics are removably mounted (figures 2, 3 and 5, element 14).

As per claim 2, Silverbrook et al. teaches a printhead assembly according to claim 1, wherein: the casing comprises a support frame (figure 2, elements 64, 94, lower parts of 76 and 32) on which at least two mounting elements are arranged in abutting relationship along a longitudinal direction of the casing; and the at least two controllers are each arranged on a printed circuit board (column 3, lines 48-50 and lines 59-65), each of the printed circuit boards being removably mounted (figure 8, element 22) by at least one of the two or more mounting elements (figure 2, element 28) and being interconnected by an electrical connecting member (figure 14, element 96 and 56) located between the abutting mounting elements (figure 5).

As per claim 3, Silverbrook et al. teaches a printhead assembly according to claim 2, wherein each of the mounting elements comprises side regions (figure 5, element 46) having raised and recessed portions arranged so that the recessed portions of abutting mounting elements form a recess into which the electrical connecting member (figure 14, elements 96 and 56) can be placed (column 2, lines 54-58).

As per claim 4, Silverbrook et al. teaches a printhead assembly according to claim 3, wherein the electrical connecting member comprises a non-conductive material (figure 14, element 96) which is clad with conductive strips (figure 14, elements 58 and 60), the electrical connecting member being arranged so as to fit within the recess formed between abutting mounting elements (see figure 5).

As per claim 5, Silverbrook et al. teaches a printhead assembly according to claim 4, wherein the conductive strips are positioned to overlay (figure 14, elements 58 and 60) a series of spaced connection strips at the edge regions (figure 3, elements 102, 106) of each of the individual printed circuit boards (figure 3, element 54).

As per claim 6, Silverbrook et al. teaches a printhead assembly according to claim 5, wherein there is twice as many conductive strips (figure 14, elements 58, 60) of the electrical connecting member as there are connection strips of the printed circuit boards (figure 3, element 28), whereby each connection strip of the printed circuit board will engage with at least one of two adjacent conductive strips (see figure 3).

As per claim 7, Silverbrook et al. teaches a printhead assembly according to claim 2, wherein one printed circuit board having one controller thereon is supported by more than one mounting element (figure 3, elements 24, 26, 28; column 3, lines 49-50 and 59-65).

As per claim 8, Silverbrook et al. teaches a printhead assembly according to claim 1, wherein: the at least one printhead module (figure 2, element 10) is formed as a unitary arrangement of the at least two printhead integrated circuits (figure 4, element 18), the support member (figure 7, element 16), the electrical connector (figure 8, element 48), and at least one fluid distribution member (figure 7, element 26) mounting the at least two printhead integrated circuits to the support member; and the support member has at least one longitudinally extending channel for carrying the printing fluid for the printhead integrated circuits and includes a plurality of apertures (figure 7,

Art Unit: 2853

element 42) extending through a wall of the support member arranged so as to direct the printing fluid from the at least one channel to associated nozzles in both, or if more than two, all of the printhead integrated circuits by way of respective ones of the fluid distribution members (figure 7, column 3, lines 45-47).

### ***Response to Arguments***

According to examiner agrees with applicant's argument against element 12 being a printhead module reading on applicant's claimed printhead module; however, examiner notes that element 10 reads upon examiner's claimed printhead module.

Drive circuits incorporating at least two integrated circuits (each module 12 in figure 2 has Memjet chip 12) has been cited by the examiner in column 3, lines 49-65 of Silverbrook et al. This art reads on the claims when read in the broadest sense. In column 3, lines 49-65, busbars 58 and 60 of figure 14 are currently cited as the controllers, as they "get data and power respectively to the chip 18".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone

Art Unit: 2853

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Laura E. Martin

*MSU 5/1/06*  
**MANISH S. SHAH**  
**PRIMARY EXAMINER**